

REMARKS

Claims 2, 3, 6, 7, 9, 10, 17 and 18 remain active in this application. Claims 4, 8 and 11 - 16 have previously been canceled. Claims 1 and 5 have been cancelled without prejudice of disclaimer and claims 2 and 3, which have been indicated to be allowable but objected to as depending from a rejected claim have been rewritten in independent form (with antecedent language correspondence being made exact) and dependency of other claims has been revised accordingly. New claims 17 and 18, identical to claims 9 and 10 but depending from claim 3, have been added. No new matter has been introduced into the application.

Claims 1 and 5 - 7 have been rejected under 35, U.S.C. §103 as being unpatentable over Colgan et al. in view of Huang et al. (newly cited) and claims 9 - 10 have been rejected under 35, U.S.C. §103 as being unpatentable over Colgan et al. in view of Huang et al. and Jain et al. These grounds of rejection are respectfully traversed, particularly as being moot in view of the cancellation of claim 1 and the rewriting of allowable claims 2 and 3 in independent form.

The Examiner now admits that Colgan et al. is deficient to answer the claims, as previously argued and cites Huang et al. to mitigate the now admitted deficiencies. However, it is respectfully submitted that the Examiner is in error in asserting that the materials of Huang et al. are the same as those of the invention since, as the Examiner evidently recognizes in the allowance of claims 2 and 3, while Huang et al. discloses a Ti/TiN barrier liner, it does not suggest tantalum or any alloy or nitride thereof. More importantly, however, the underlying conductor layer 10 is disclosed to be merely that: a "conductor layer" (column 2, lines 16 and 33, the only references thereto in Huang et al.) without mention of copper, as claimed.

There is no indication whatever, in Huang et al. of the particular and unexpected utility of the structure claimed which overcomes problems specific to via connections to copper and which allows omission of a duplicative metal layer having the sole function of altering the metallurgy employed (see, for example, page 3, line 24, to page 4, line 16, of the present specification). That is, Huang et al. does not lead to an expectation of deriving the meritorious effects of the invention from the structure claimed and thus cannot provide evidence of a level of ordinary skill in the art which would support the conclusion of obviousness which the Examiner has asserted.

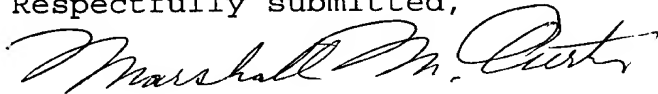
Accordingly, it is respectfully submitted that the Examiner has not made a *prima facie* demonstration of the propriety of either asserted ground of rejection.

Nevertheless, to render the issue moot, allowed claims 2 and 3 have been rewritten in independent form and all dependent claims have been made variously dependent thereon. Therefore, it is respectfully submitted that the above amendment *prima facie* places the application in condition for immediate allowance. Should the Examiner become aware of any further issue(s) which would preclude such immediate allowance, it is respectfully requested that the Examiner contact the undersigned by telephone at the number provided below in order to expeditiously resolve such issue(s).

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 09/0458 of International Business Machines Corporation (E. Fishkill).

Respectfully submitted,



Marshall M. Curtis
Reg. No. 33,138

Whitham, Curtis & Christofferson, P. C.
11491 Sunset Hills Road, Suite 340
Reston, Virginia 20190

(703) 787-9400
Customer Number: 30743